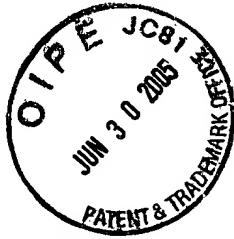


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 8400**  
Mitsuaki OSHIMA et al. : Docket No. 2000\_1307  
Serial No. 09/667,525 : Group Art Unit 2634  
Filed September 21, 2000 : Examiner Amanda Le  
COMMUNICATION SYSTEM : **Mail Stop: AF**



**RESPONSE TO FINAL REJECTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Sir:

This paper is in response to the Final Office Action mailed February 4, 2005.

Claims 1-27 are canceled and claims 28-36 are pending.

Claims 28-36 were rejected under 35 U.S.C. 102(b) as being anticipated by Hinoshita. This rejection is traversed.

Applicants wish to thank the Examiner for the time and consideration during the interview with Applicants' representative on May 24, 2005. During the interview, Applicants' representative asserted that the filter of Hinoshita is not a digital filter and does not include the recited roll-off characteristic. The Examiner's position was that even if it is assumed that the filter of Hinoshita is not a digital filter, it would have been obvious to modify the filter to be a digital filter, and that the roll-off characteristic is disclosed in the filter of Fig. 7 of Hinoshita.

Upon further consideration of the Examiner's position, Applicants assert that even though a combination of the systems of Figs. 4 and 7 of Hinoshita is suggested in that reference, such a combined system would not anticipate or render obvious the present invention for the following reasons.

Each of the pending independent claims includes a recitation drawn to a filter having both a VSB characteristic and a roll-off characteristic. As shown in Fig. 174 of the present application, the

FIR filter can be a VSB or QAM filter. If the FIR filter is realized as one which can be set as either a VSB or QAM filter, the filter has a portion for each of the I and Q channels, which are set at the same level for VSB modulation, see column 59, lines 56-59. Moreover, the FIR filter has a roll-off characteristic, see column 59, lines 60-64.

The Examiner asserts that blocks 30, 32, 34 of Fig. 4 of Hinoshita constitute a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, said filter being operable to filter the n-level digital mapped signal to produce a VSB modulated signal. This position by the Examiner is incorrect. As explicitly depicted in Fig. 4 of Hinoshita, element 34 is a band pass filter and elements 30 and 32 are a modulator and mixer, respectively. Thus, elements 30 and 32 are not filters or parts of a filter.

Even though Hinoshita discloses in column 4, lines 15-22, that the “DSB (double side band) signal such as shown in Fig. 5B ... is filtered by band filter 34 into a VSB (vestigial side band) signal such as depicted in Fig. 5D,” the reference does not disclose or suggest that the band pass filter 34 includes a roll-off characteristic. The signal shown in Fig. 5B is filtered by filter 34 to a VSB signal shown in Fig. 5D. Fig. 5D shows a VSB filter characteristic, but does not show a roll-off characteristic. Thus, Hinoshita does not disclose or suggest that the filter 34 has a roll-off characteristic. It is noted that the signal of Fig. 5B may appear to show a roll-off, but Fig. 5B only shows the frequency envelope of the signal exiting the modulator 30 and does not show any characteristic of the filter 34.

When Hinoshita does discuss a roll-off filter, it is with reference to the base-band system of Fig. 7, see column 5, line 61 to column 6, line 3. Even though Hinoshita suggests that the base-band system of Fig. 7 could be modified by the addition of suitable carrier modulation and demodulation components from the system of Fig. 4, such a system would not include a filter having both a VSB characteristic and a roll-off characteristic as recited the present claims. This is true because the roll-off filter 54 is present in the base-band portion of the system, i.e., before or upstream of modulation, whereas the band filter 34 with the VSB characteristic is after or downstream of the modulator 30. Thus, while a combined system of Figs. 4 and 7 might include a filter 34 with a VSB characteristic and a roll-off filter 54, no obvious combination of the systems of Figs. 4 and 7 of Hinoshita would include the VSB characteristic and the roll-off characteristic in the same filter.

In view of the above, it is clear that the inventions of claims 28-36 are not anticipated by, or rendered obvious in view of, the prior art. Accordingly, it is submitted that the present application is in condition for allowance.

The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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